

SECTION 401 PRIME, TACK, OR FOG COAT

401.01 DESCRIPTION.

This work consists of preparing and treating a surface with bitumen and blotter material.

401.02 MATERIALS.

- A. **Bitumen.** The type and grade of bitumen will be specified in the Contract.

Bitumen shall meet and will be accepted according to Section 818. Bitumen will be conditionally accepted at the Project and sampled according to Department procedures.

Bituminous materials for the several applications indicated in Section 400 shall be applied within the temperature ranges recommended by the manufacturer.

- B. **Blotter Material.** Blotter material shall meet Section 816, Class 44.

401.03 EQUIPMENT.

Equipment shall meet the following:

Item	Section
General	151.01
Self-Propelled Pneumatic-Tired Rollers	151.02 B
Material-Hauling Equipment	151.03 B
Liquid Bitumen Distributors	151.05
Heating Equipment for Bitumen	152.01 B
Aggregate Spreader	151.06

401.04 CONSTRUCTION REQUIREMENTS.

- A. **Preparation of Surface.** Before application of bitumen, all broken or unstable surface shall be repaired and compacted and the surface shall be free of any loose dirt and other objectionable material.

Broken or unstable surfaces shall be repaired at the Contractors expense unless the surface was constructed under a previous Contract, then repair costs will be paid according to Section 104.03 D or as a Bid Item.

- B. **Application of Bitumen.** Bitumen shall be applied with a distributor at the rate specified or as otherwise directed. Hand sprayers shall be used to cover irregular areas or shapes and areas missed by the distributor.

Emulsified asphalt for fog or tack coat shall be diluted with water before application in a 50–50 ratio unless other approved proportions are directed by the Engineer. Cost of water shall be included in the price bid for “Emulsified Asphalt.”

The rate of application and areas to be treated shall be approved by the Engineer before application.

When traffic is maintained, the bitumen shall be applied in passes of approximately 1/2 the width of the completed surface. If the width of the surface makes such application impracticable, the bitumen may be applied in more than 2 passes. Care shall be taken so the application of bitumen at the junction of passes is not in excess of the specified quantity. Excess bitumen shall be squeegeed from the surface. There shall be an overlap of bitumen along adjoining edges of the passes.

The surface of all structures and other roadway appurtenances shall be protected against splattering. If splattering occurs, all bitumen shall be removed to the satisfaction of the Engineer at the Contractor’s expense.

- C. **Application of Blotter Material.** Blotter material shall be applied at the rate designated in the Contract, or the quantity may be increased, decreased, or eliminated as directed by the Engineer to allow for field conditions.

Blotter material shall not be applied until the Engineer has determined that the penetration of bitumen into the surface is adequate, or that no further penetration is probable.

- D. **Maintenance and Opening to Traffic.** Traffic shall not be permitted on the primed, fogged or tacked surface until the bitumen has penetrated and dried to the point where it won’t be picked up by traffic, or until blotter material has been applied.

All work shall be protected and maintained at the Contractor’s expense. Maintenance includes repairing areas displaced due to traffic or subsequent construction operations.

Traffic control consisting of flagpersons, pilot cars, signs, and lights shall be furnished at the Contractor’s expense unless otherwise provided in the Contract.

- E. **Limitations.** A tack coat shall not be applied when the atmospheric temperature is below the temperature requirements identified in Section 408.04 M.1. The application of a prime or fog coat shall not be allowed when the atmospheric temperature is below 40 °F.

After applying a prime coat to the compacted aggregate base, the prime coat shall be allowed to cure at least 48 hours after application, before placing hot bituminous pavement. The Engineer may elect to reduce this 48 hour requirement if weather conditions permit a more rapid cure. The Engineer may order blotter material to be spread at any time after application of prime coat, when it is impractical to prohibit traffic from use of the primed surface for the desired 48 hour period.

Bitumen for fog or tack coats shall not be applied on a wet surface.

401.05 METHOD OF MEASUREMENT.

- A. **Bitumen.** Bitumen will be measured by the Ton or Gallon according to Section 109.

- B. **Blotter Material.** Blotter Material will be measured by the Ton or Cubic Yard according to Section 109.
- C. **Water.** Water will be measured according to Section 216.

401.06 BASIS OF PAYMENT.

Payment will be made at the Contract Unit Price for the following:

Pay Item	Pay Unit
---Asphalt Cement	Ton or Gallon
Liquid Asphalt	Ton or Gallon
---Emulsified Asphalt	Ton or Gallon
Blotter Material	Ton or Cubic Yard
Water	M. Gallons

This payment will be full compensation for all labor, equipment, and materials necessary to complete the work.

SECTION 402 COLD BITUMINOUS PAVEMENT

402.01 DESCRIPTION.

This work consists of constructing one or more courses of cold bituminous mixture on a prepared foundation.

402.02 MATERIALS.

- A. **Bitumen.** The type and grade of bitumen will be specified. Bitumen shall meet and will be accepted according to Section 818. Bitumen will be conditionally accepted at the Project and sampled according to Department procedures.
- B. **Aggregate.** Aggregates shall meet Section 816 for the class of aggregate specified. The aggregate will be accepted prior to the addition of bitumen. Acceptance will be based on periodic samples of the windrow after all aggregates have been blended for each lift, or taken from the stationary plant if a plant is used. The maximum size aggregate shall be 5/8 inch.

402.03 EQUIPMENT.

Equipment shall meet the following:

Item	Section
General	151.01
Self-Propelled Pneumatic-Tired Rollers	151.02 B
Smooth-Faced Steel Wheel Rollers - Tandem - Type A	151.02 C.2
Vibratory Rollers	151.02 D
Material-Hauling Equipment	151.03 B
Liquid Bitumen Distributors	151.05
Hot Bituminous Equipment	152